Corrective Action Report			
This report apply for: ☐ System ■ Product ☐ Process Inspector: Di Nan Confirmed By: Liang Zhang			**Order Number: 122480** Issue Date: 2014.4.15
General Information:			
P.N.:	Description: BOSS,SENSOR OXYGEN	Company: Nanjing Best International Co., Ltd.	Reject Rate: 27.4%
The reason for this report: ☐ internal QA FAIL ■ Customer Inspection FAIL ☐ Customer Complaint ☐ others:			
Defect Problem Description: M18×1.5-6H internal thread is not perpendicular to the face of the part			

1) Problem Definition and Analysis.	
What (what the problem is about, how describes it, what it is, etc)	M18×1.5-6H internal thread is not perpendicular to the face of part, actual max measurement is 0.070”
How (how it was presented, how it happens, how is explained, etc)	Customers found the above problems in the inspection of thread and feedback us by the form of mail and picture. At the same time, some of the substandard products were given back for analyzing.
When (When it was seen first time, how long it has been identified, etc)	Email feedback on April 15, 2014
Where (In which machine, which areas, physical place, location, etc)	Customers find the above problems at their side.
How Much (magnitude, quantities, amounts, dollars, metrics affected, etc)	1096pcs

2) Teamwork Building.

Total documentation of the resources involved in problem solving methodology.

Name *	**Position** (Employee position)	**Role** (in the team)
Liang Zhang	technical engineer	Responsible for product development related technology

Qin Ma	director the of production department	Responsible for product production schedule
Di Nan	inspection engineer	Responsible for product inspection
Yun Chen	purchasing engineer	Responsible for purchasing and outsourcing related work

3) Containment Actions.

Summary of provisional actions and/or remedies that suspend immediate and absolutely the effects of the problem avoiding consecutive claims

Containment Action *	Date	Resp.
Recall the outsourced surface treated products (if the product has been surface treated, then quarantine after handling)	2014-4-16	Yun Chen
Quarantine all made products and spot check products under making	2014-4-23	Di Nan
Adjust products tooling fixture, and increase the product sampling inspection	2014-4-23	Liang Zhang
Full inspection on perpendicularity for quarantined products and products under making.	2014-5-8	Qin Ma

4) Root Cause Analysis.

Identification of original cause and capable to eliminate the problem and all secondary effects, also removes immediate containment actions mentioned below

Problem Analysis (Logic to conclude the root cause)	1. Did not consider the thread perpendicularity in machining fixture; 2. Did not check the first and last pieces on thread perpendicularity. 3. Patrol inspectors did not inspect the thread perpendicularity; 4. Worksheet and inspection instructions did not require thread perpendicularity inspection 5.Technology department failed to identify this features
Root Cause	1. Technology department failed to identify this feature 2.Did not consider the feature when design and make the fixture
Root Cause Verification (Verify through Experimentation that the root cause detected could provoke that the problem shows up or not)	Did not consider the thread perpendicularity when the design the machining fixture

5) Permanent Corrective Actions.

1. increase the thread perpendicularity requirements on drawing 2.Design a new machining fixture, incorporating the perpendicularity of the thread into the new tooling design account

Action *	Date	Resp.
Defect Occurrence Corrective Action Adjust the process equipment, and design a new fixture	2014-5-15	Liang Zhang
Defect Detection Corrective Action To scrap the out-of-tolerance products	For a long time to perform	Di Nan

6) Corrective Actions Verification.

Describe the way in which you verify that all actions have been implemented.

Verification *	Date	Resp.
On May 22, 2014, finish the new fixture, and do continuous inspection of machining products (continuous machining and inspection 1000pcs products, did not find perpendicularity out of tolerance)	2014-5-24	Qin Ma Di Nan Liang Zhang

7) Recurrence Prevention.

Describes which is the way in which you will be preventing that root causes like this could be originated again.

Action *	Document	Date	Resp.
Strengthen the process inspection, and do the full check on thread perpendicularity	Operation instruction	2014-5-25	Qin Ma Di Nan

8) Effectiveness Tracing

According to the customer feedback E-mail on June 16, there was no thread out of perpendicularity tolerance air shipped on May 30

Confirm:	According to the result of our internal inspection and customer feedback, new fixture had met the requirements of the perpendicularity of the thread.
Date:	16th, July, 2014
Engineer:	Liang Zhang, Di Nan